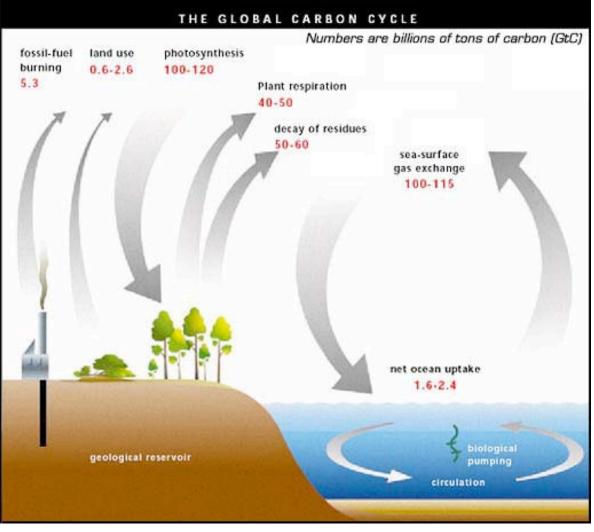




Forests in the Carbon Cycle



Content source: Kasting, James. 1998. **The Carbon Cycle, Climate, and the Long-Term Effects of Fossil Fuel Burning**. Consequences: The Nature and Implication of Environmental Change (Volume 4, Number 1)



Forests – Part of the Problem and Part of the Solution

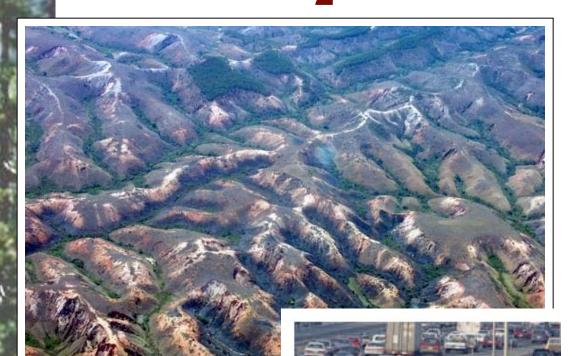


•Absorbed CO2 from photosynthesis is 'sequestered'.

•CO2 is released back into the atmosphere when harvested (and decayed) or burned.



The Forest Sector is a Source of Global CO₂ Emissions



- •Forest Sector contributes approx. 20% of global CO₂ emissions largely due to forest loss
- •Forest loss = CO_2 emissions from 1.4 billion cars annually



California's Forest Threats



•Conversion to Agriculture.

•Conversion to Housing.



Why are Conversions Occurring?



Increasing management costs

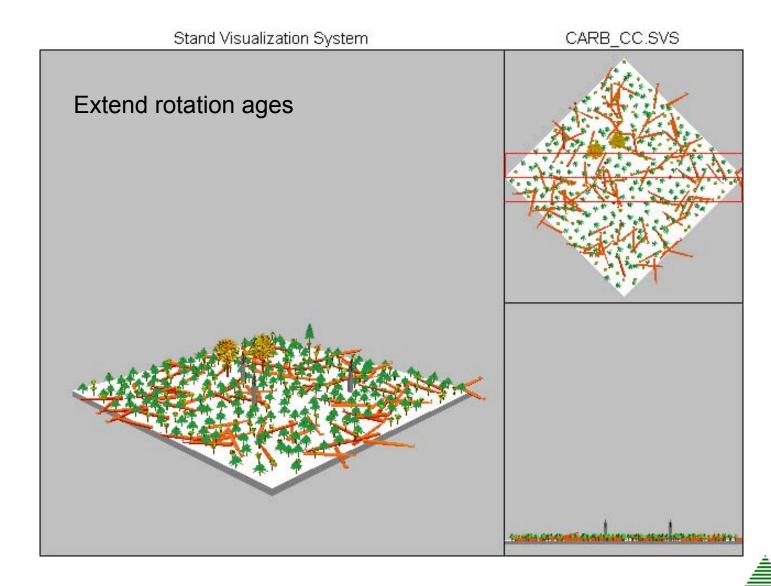
Increasing real estate values

• Other forest values such as habitat, clean water, recreation, and carbon sequestration are not rewarded financially.



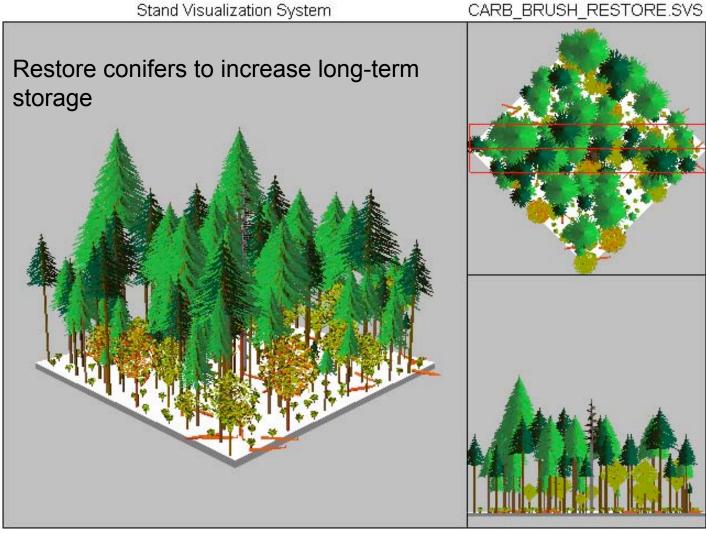


What can Forest Managers do?





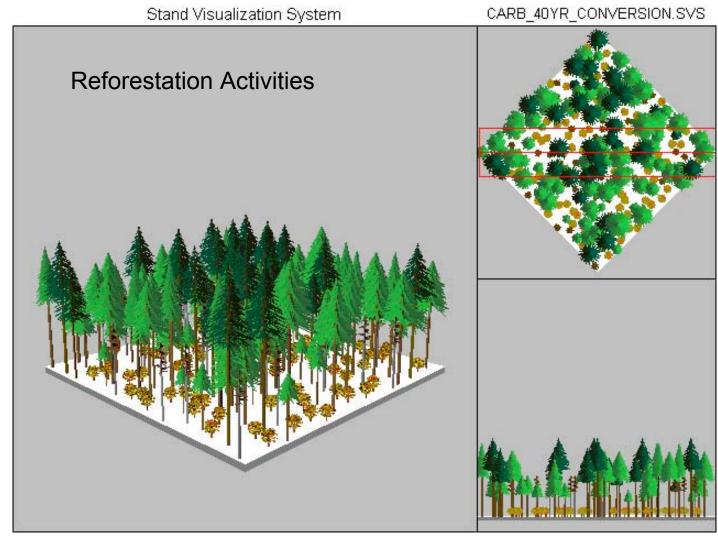
What can Forest Managers do?







What can Forest Managers do?







Incentives to keep Forests Working

- Establish a greenhouse cap and trade system to monetize forest carbon sequestration.
- Provide tax incentives, regulatory relief, and direct payments for landowners who permanently sequester carbon above legal standards.
- Provide policies that provide marketbased solutions to wildfire risk reductions.





In Summary.....



The forest sector can produce significant climate benefits when-

- •Managed/restored to increase overall Forest C Stocks and
- Protected to prevent CO₂ emissions



